THE VETERINARY RECORD

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Comparative Medicine.

Until it became fashionable to diagnose disease by the aid of culture-mediums, very few of the specific diseases of animals were discovered in man. Bacteriologists have enlarged our knowledge and taught us that the bacilli which produce tuberculosis, anthrax, and glanders in man, are the same causal organisms for these diseases in the lower animals. The pursuit of bacteriology has, however, more than once misled scientists and practitioners. Swine-fever in pigs has been thought analogous to typhoid fever in man. Sore throats in horses have been accused of transmitting diphtheria to human beings. Scarlet fever has been traced to the eruption of cow-pox on the udders of cows, and the identity of the two complaints confirmed by the discovery in both of a streptococcus which cannot cause either.

Veterinarians do not claim an absolute monopoly of all disease outside of the human patient, but they do imagine that their acquaintance with the diseases of animals is special and peculiar—so special that their opinion might have some weight with all students of comparative medicine. Veterinarians are only too glad to accept new truths and improved methods from surgeons and physicians. Is it too immodest to mildly suggest that we may occasionally correct an error on the other side, or even again offer a new truth as has been done by Chauveau, Hering, Bang, and McFadyean. If it be not beneath the dignity of a human medical practitioner, when he has discovered a rare disease in man analogous to some well-recognised disease of animals, to call in a veterinary surgeon much good might result. The varied experience thus brought to bear might correct an error or elucidate a truth. The simultaneous prevalence in a district of distemper in dogs with measles in children would afford much material for study. The non-existence of scarlet fever in a town, with the extensive prevalence of an udder eruption on the milch cows would present an interesting problem. These desirable investigations cannot now be instituted because medical and veterinary authorities conduct no conjoint enquiries. Private effort might do a good deal to alter this, but still greater results would be obtained from mutual co-operation between medical officers of health and district veterinary inspectors.

These remarks have been suggested by a perusal of a report in *The Lancet* of last week of a case of foot-and-mouth disease in a boy. The case occurred last July and opens up a very serious issue. If this disease can occur in human beings, it may easily be carried in this manner from the Continent, and no efforts—even total prohibition of importation of live-stock—can render our herds secure against infection. The case appears among the "extracts" this week and should be studied by all our readers. The narrator says "the diagnosis presented no difficulty," and the clinical recognition is corroborated by a bacteriological report which ends in this wise—"we have no doubt that we are dealing with the particular pathogenic streptococcus Klein described as being the cause of the foot-and-mouth disease amongst cattle etc."

For two reasons we refrain from suggesting that this remarkable case should be brought under the attention of the Board of Agriculture—(*a*) because it would be unkind to increase the anxiety and burden of an over-strained department now being defeated by the solitary disease against which their whole energies are directed; (*b*) because we have some doubts as to Dr. Bligh having underestimated the difficulties of diagnosis. When, some years ago, half a million cases of foot-and-mouth disease were to be found infecting cattle and sheep it was difficult to trace half a dozen instances of infection in man. Now, when foot-and-mouth disease has for months been a stranger to the kingdom we find a case in the human subject. We have no recollection of a cutaneous eruption such as now described on the bodies of human patients then reported to have been infected from diseased milk. Of course the whole question turns upon the question of similarity or sameness. There are doubtless cases of foot-and-mouth disease in both men and women, but they are not always identical with the specific disease recognised in cattle. We remember a well-known actor raising his hearers' interest and sympathy by declaring he was suffering from "foot-and-mouth disease." His explanation dissipated all pathological interest—it was "I've got a corn and the tooth-ache."

Prohibition of Live Stock Importation.

Agricultural depression and the willingness of a political party (both sides) to pander to the weaknesses and supposed interests of its supporters, render not unlikely some attempt to put a total stop to the importation of foreign cattle. From a veterinary point of view there is no necessity for such an extreme measure. Never yet has a contagious disease been known to spread from the slaughter-houses which have for years been in use at many large ports. If, however, the proposal be to prohibit the landing of all live-stock except for slaughter at the port, veterinary knowledge and experience are all in its favour. Such a law would not interfere with our meat supply and would afford absolute protection from disease without constantly inflicting hardship upon importers by sudden alterations which disorganise trade.

Such a law would have a distinct effect upon the State Veterinary department, for a central staff at the Board of Agriculture would soon be without work—excepting the control of such diseases as were dangerous to man—rabies, glanders, tuberculosis and anthrax. When this time arrives veterinary inspectors will not be wanted for the interests of agriculture but for the interests of human health. This subject is dealt with at the Local Government Board, and might be effectively assisted by adding Veterinary officers to the Medical officers at that department. If swine-fever were only out of the way what a grand scheme might be evolved!

CASES AND ARTICLES.

GASTRITIS COMPLICATED WITH MENINGITIS.

By E. Wallis Hoare, F.R.C.V.S.

Case I. *Subject.*—An aged troop horse.

Previous History.—Healthy.

Clinical History.— While at work in the Riding School appeared dull and sleepy, was ordered to stables, showed a tendency to look for support, and lay down, commenced to struggle violently and was unable to rise. Continued in this condition all night, sedative agents administered having no effect.

Next morning there were violent convulsions manifested, with short periods of apparent repose, both fore and hind limbs being affected; the eyes were constantly moved in all directions in a convulsive manner, the pupils were dilated and the sclerotic coat deeply injected. The pulse during periods of repose was weak and compressible, temperature 102dgs., respirations accelerated and occasionally stertorous, visible mucous membrane injected. There was profuse sweating, and the hind quarters were completely paralysed.

In consequence of the violence displayed by the animal, it was dangerous to approach or handle, the movements executed resembled to a great extent those of "galloping" in a figurative sense. Chloroform was administered, and the urine drawn off with the catheter, there being no appreciable alteration in this secretion.

As there seemed no possible chance of recovery, the chloroform was continued, and in a very short time death occurred, this event being preceded by twitching movements of fore and hind limbs.

Autopsy.—Carcase in very fat condition. Villous mucous membrane of stomach was acutely inflamed, especially in patches, this viscus containing a small amount of partly digested oats. Small intestines almost empty, large intestines normal.

Examined the brain and found the meninges opaque in appearance, and even the most minute bloodvessels deeply injected. The cervical portion of the spinal cord was also examined, the meninges of which were thickened, opaque, and deeply injected. Pressure of time prevented a further examination.

Case II. *Subject.*—A bay troop mare four years old.

Previous History.—Had just recovered from an attack of strangles, and was only allowed gentle exercise.

Clinical History. — At 7.15 a.m. while being groomed, was observed to shiver, lay down soon afterwards and commenced to struggle violently, with fore and hind limbs, in a convulsive manner. Temperature 102dgs., pulse quick and weak, respirations accelerated, spasmodic movements of both eyes, and at intervals the *membrana nictitans* was drawn quickly over each eye. Hind quarters completely paralysed; there were short intervals of repose during which the animal would look up, grasp a bite of hay, and drink bran-water eagerly.

Sedatives administered produced no effect, and next day the animal continued in the same condition, appeared at times comatose, and without any warning violent struggling would again ensue.

The animal was kept under the influence of chloroform at intervals, and died the same night.

Autopsy.—Stomach contained a small amount of semi-fluid ingesta. The villous mucous membrane was acutely inflamed. The peritoneum was inflamed in patches, probably due to injuries received during violent struggling.

On removing the head for examination, a large amount of fluid issued from the spinal canal. The meninges of the brain and spinal cord (cervical portion) were opaque, deeply injected, and considerable effusion was present. I was unable to make a complete examination of the spinal cord as time was limited.

Remarks.—The above cases occurred within two months of each other, in the same stables. No cause could be discovered although some time previously to this a case of a similar nature was observed, in which the patient was very violent, but able to move round the stall, until a comatose condition supervened, followed by death.

Such cases are not common in practice, and a satisfactory explanation of their ætiology cannot be easily given. We are quite well aware that although cases of gastritis may be accompanied by violent symptoms, still those peculiar nervous phenomena are not present in many instances. The violent convulsive movements, the peculiar appearance of the eyes, the sudden occurrence of paralysis, and the periods of excitement followed by apparent repose and terminating in a comatose condition, all point to some serious affection of the nervous system.

The following case occurred in the same village as the barrack stables were located, just twelve days previous to the appearance of case No. 2. I do not intend to connect these cases as regards the causes, as the following may only be a coincidence.

Subject.—An aged grey mare used for posting.

Previous History.—Healthy.

Clinical History.—Was driven a journey of sixteen miles, appeared sick on the road, and purged violently. On my attendance at 9 a.m. I found the patient very weak, no appearance of pain, total loss of appetite, pulse weak and compressible, temperature 102dgs., care-worn expression of countenance, anxious to lie down and rest, abdomen tucked-up and empty-looking, visible mucous membranes pale.

Purging at intervals still continued, so I prescribed chlorodyne ʒj., spts. æth. nit. ʒij, whisky ʒij, to be given in flour gruel. Allowed warm milk and lime water to drink, of which the patient partook and seemed improved. At 4 p.m. signs of acute abdominal pain appeared, the animal went down in a corner of the stall in a helpless manner, and kept the head turned towards the right side, violent convulsive movements of both fore and hind limbs occurred, with spasmodic twitching of the muscles of the shoulders. At intervals she would partially raise herself, and lie on the sternum with the fore legs extended. The convulsive movements became more violent, so that it was dangerous to enter the stall, and she died at 6 p.m. after groaning deeply, and breathing in a stertorous manner.

Autopsy.—Stomach contained a small amount of semi-fluid ingesta, the villous mucous membrane was acutely inflamed and of a rich crimson colour; other abdominal organs normal, small intestines perfectly empty, the large colon contained a small amount of fluid ingesta. Examined brain, and found deep injection of the meninges, with abundant effusion.

Remarks.—The above case is interesting from a clinical point of view, the sudden appearance of convulsions after a long period of apparent quietude, being rather unusual. There is a wide field for investigation with reference to gastric affections in the equine species. We learn but little from the cases that recover, and it is only by comparing clinical histories with the evidence afforded by autopsies that we can hope to improve our knowledge on this important subject. But the difficulty in carrying out our investigations in this direction is only too well-known to practitioners. Many interesting cases terminate fatally and we are unable to obtain an examination after death in consequence of perhaps the necessity of attending a long distance in order to carry out our object. Or, if the patient dies in a town stable, the owner has the carcase removed as soon as possible to a far distant kennel, before the practitioner has time to make any arrangements with reference to the autopsy. Many carefully recorded clinical records are rendered comparatively useless in consequence of the want of properly organized knacker's yards in some districts, and much valuable material is lost by reason of this. Frequently we have either to act in defiance of sanitary authorities, and perform the autopsy in town, or undergo the chagrin of attending at far distant kennels and finding the carcase cut up and already undergoing the process of cooking for the hounds.

(To be continued)

ON THE USE OF BARIUM CHLORIDE IN CASES OF COLIC.

By W. H. Flook, M.R.C.V.S.

Having read an extract in the August number of *The Veterinarian* from an article by Professor Dieckerhoff, giving results of his experiments with barium chloride, and not having since read of the drug being tried by English veterinarians, I beg to record the following:—

When on a friendly visit on November 23rd to my friend Mr. Henry Gray, of Earl's Court Road, he was called to a stable close by to visit a horse said to be suffering from colic. I went with him, and saw a bay gelding on the pillar-rein, with a man beside him keeping him up. Pulse 40 but full and bounding, membranes rather pale, temperature not taken. The ordinary colic draughts had been given without effect. Mr. Gray injected, slowly, ten grains of barium chloride in three drachms of cold water, into the jugular vein. The horse began to cock his tail, and arch his back in three minutes after the injection, and in five passed a small quantity of fæces, and continued to do so at intervals for 20 minutes, the whole amount, however, not being great. The pain increased considerably for a short time, especially just before defæcation, then began to die away. I took the temperature as requested directly there was an interval of quiet. The horse strained very hard against the thermometer, which registered 100.4. The pulse at the same time was found to be normal and softer in character, membranes natural colour. My attention was called away to a second case of colic, of which more anon, so that although observing that the bay horse shook himself, urinated, yawned etc., I did not take much further notice of him, nor note the time until he was led round to his manger where a bran mash was eagerly attacked. I then looked at my watch and found that one hour and five minutes only had elapsed since the administration of the drug. I should have liked to have seen the case next day to note for myself whether the after effects were indeed *nil* and thus have compared it in this respect with physostigmin, which I have given intravenously, on several occasions with benefit in impaction of the colon. It has always been followed by after depression except in one case, the only one not followed by evacuation of fæces, this being due in my opinion to a previous dose of chloral.

While the above case was under observation a groom came to say that his horse was very bad in an adjoining stable on the same premises. Mr. Gray directed him to bring the horse in and place him in an empty stall next the first patient. The man said he doubted if he would be able, and certainly when brought in, the horse, a well-bred black gelding, about 16 hands, was very violent, so violent that to give a drench would have been almost an impossibility, and indeed the injection of a similar, perhaps slightly smaller, dose of the same drug (a few drops escaped from the syringe owing to the violent struggles of the animal) was found sufficiently difficult.

The horse now became more violent than before, if possible, but subsequently quieter. I had to leave before the termination of this case, but I saw that the drug acted in three minutes, also noticed that the membranes, highly injected before the drug was given, appeared more so after it had operated, but this was probably due to his violence and to his having knocked his head about during his struggles.

The quantity of fæces passed in this case also, I should add, was not great, but must not omit to say that neither case was diagnosed as impaction, so that this would be no guide as to what the effect would be in this particular in a decided case of impacted colon. Both were diagnosed as spasmodic colic due to the change of weather.

On to-day (25th November) referring to the note in *The Veterinarian* above mentioned it is said: "When injected into the jugular vein the evacuation of the large intestine takes place in a minute or two, and it is speedily followed by the more or less liquid contents of the higher bowels." The latter I did not see, and indeed the fæces were quite formed although softer than the usual. The reason for this difference was, perhaps, also due to the cases not being those of impaction.

I was much interested and struck by the speedy and pleasing termination of the first case under this

new, and may I say it, *homœopathic* treatment of *spasmodic* colic.

I have not seen Mr. Gray nor heard from him since I left him attending the second case above mentioned. Mr. Gray has on several occasions treated spasmodic colic as well as impaction in the same way with great success.

Since writing this account I have heard from Mr. Gray that both horses went to work on Monday, 25th, and would have done so on Sunday had they been wanted.

THE VETERINARIAN AND LEGISLATION.

The Anthrax Order of 1895.

This Order, which came into operation on the 1st of April, provides that certain sections of the Diseases of Animals Act of 1894 are extended so that horses, asses, and mules, as well as cattle, sheep, goats, and all other ruminating animals, and swine, shall be the animals; and anthrax (that is to say, the disease called or known as anthrax, splenic fever, or splenic apoplexy of animals) shall be the disease.

Every person having, or having had in his possession, or under his charge any animal affected with or suspected of anthrax must give notice to the police of the district, the police will notify the Inspector of the Local Authority, and the Inspector shall notify the Medical Officer of Health of the Sanitary District.

Local Authorities may give public warning by placards, advertisements, or otherwise of the existence of anthrax in any stable, building, field or other place and may continue to do so until the premises have been cleansed and disinfected.

Milk of a diseased or suspected cow shall not be removed from any shed, stable, building, or other place.

Dung, fodder, or litter that has been in contact with or used about a diseased or suspected animal may not be removed until it has been so far as practicable, disinfected, and then only under license of the Local Authority.

Carcases of animals which were diseased when they died or were slaughtered, must be disposed of by the Local Authority either by burial in quicklime at least six feet deep, at a suitable place removed from any dwelling house, and at such a distance from any well or watercourse as will preclude any risk of the contamination of the water therein, or destroyed by exposure to a high temperature, or by chemical agents. In no case shall the skin of the carcase be cut nor shall anything be done to cause the effusion of blood. It is unlawful to dig up the carcase of any diseased animal except with a license of the Board.

The Local Authority shall, at their own expense, cause to be cleansed and disinfected any shed, stable, building, or other place in which a diseased or suspected animal has been kept; and any utensil, pen, hurdle, cart, van or other vehicle used for, by or about any diseased animal as far as practicable in the following manner—all dung, fodder, or litter to be removed and disinfected to the satisfaction of the Inspector, or burnt, and all places etc. shall be washed, or scrubbed, or scoured with water, and shall then be washed over with limewash made of freshly burnt lime and water, and containing in each gallon of limewash four ounces of chloride of lime or half-a-pint of commercial carbolic acid.

Occupiers and owners shall, under penalty, give all reasonable facilities for cleansing and disinfection of premises, etc.

Local Authorities may make regulations for prohibiting or regulating into or out of any premises any diseased or suspected animal, and for regulating the removal of manure, fodder, etc.

Local Authorities may cause to be slaughtered any diseased or suspected animal, or any animal that has been in any way exposed to the infection of anthrax, providing that if the owner of the animal gives notice in writing to the Local Authority or their Inspector, that he objects to the animal being slaughtered, it shall not be lawful for the Local Authority to cause the animal to be slaughtered except with the further special authority of the Board.

Local Authorities shall pay compensation in respect of animals so slaughtered, in the case of a diseased animal one-half value, and in every other case the full value of the animal immediately before slaughter.

If any difficulty should arise as to valuation, the provisions of the Arbitration Act of 1889 shall apply.

A Local Authority may, if they think fit, withhold, either wholly or partially, compensation in respect of any animal slaughtered by their order where the animal was diseased at the time of its being brought into their district.

Local Authorities must keep a record of animals slaughtered in the form prescribed by the Board.

Though the provisions of this Order must be enforced by the Local Authority, the Board of Agriculture reserves the right to make regulations as to movement of animals and for other purposes.

Inspectors must on the Saturday of every week report each case to the Local Authority and to the Board.

The Order extends to England, Wales, and Scotland.

VETERINARY SOCIETIES.

ROYAL COUNTIES VETERINARY MEDICAL ASSOCIATION.

Annual Meeting in London.

A general meeting of the members of the Association was held on Friday, November 29th, at 10 Red Lion Square, to elect officers for the ensuing year, and other business. Owing to various causes the attendance was but small. Mr. A. L. Butters, (London) the senior vice-president, was voted to the chair in the unavoidable absence of the President (Mr. T. B. Goodall, Christchurch), and there were also present: Messrs. J. P. S. Walker, Oxford, vice-pres. and hon. treas.; James F. Simpson, (President of the College) of Maidenhead; H. G. Rogers, London; J. Sutcliffe Hurndall. London, hon. sec.; Albert Wheatley, Reading; Thos. W. Lepper,

Aylesbury; Walter Western, Bracknell; H. Watkins Pitchford, Blackwater; and H. C. Legge, Dorking.

The minutes of last meeting were duly confirmed and signed, and the Hon. Sec. read a letter from the President expressing great regret at his inability to attend, wishing the Association every success, and thanking Mr. Hurndall for making the duties of his office so light and pleasant during the year.

Treasurer's Report.

Mr. J. P. S. Walker said he had little to report as Treasurer, except that their funds were in a flourishing condition. The abstract of accounts for 1895 was as follows: To balance brought forward £76, members' subscriptions £24 13s. 6d., total £100 13s. 6d. Accounts paid during the year £8 8s. 9d., leaving a balance in the bank of £92 4s. 9d. The number of members at present on the roll was 51, which was rather less than they had some years ago, but he was pleased to see that there were four new members for election that day. One member (Mr. Hatch) had resigned during the year, and a few subscriptions had not been paid.

The vouchers, etc., were examined and the Chairman said he thought they might congratulate the Association on the state of its finances.

The report was unanimously adopted on the motion of Mr. Lepper, seconded by Mr. Wheatley.

Election of Officers.

Mr. Walker proposed and Mr. Rogers seconded, with much pleasure, the election of Mr. A. L. Butters as president for the ensuing year; and the resolution was passed amid hearty acclamations.

The President-elect said he could only thank them for the unexpected honour they had done him in that election. He was a very young member of the Association, and he assured them he fully felt the honour and the difficulties of the position, but he should be very pleased to do all in his power for the benefit of that Association during his year of office. (Applause).

The following gentlemen were unanimously elected vice-presidents: Mr. H. G. Rogers, proposed by Mr. Wheatley, seconded by Mr. Walker; Mr. T. W. Lepper, proposed by Mr. Wheatley, seconded by Mr. Walker; Mr. Walter Western, proposed by the Hon. Sec., seconded by Mr. J. F. Simpson; and Mr. T. B. Goodall, proposed by Mr. Rogers and seconded by the Hon. Sec.

The Chairman said there could not be two opinions about who was the right man to propose for election as treasurer. (Hear, hear.) In their present treasurer they had the right man in the right place, and they all thanked Mr. Walker very heartily for his services in that capacity ever since the formation of the Association. (Applause).

The Hon. Secretay had very much pleasure in seconding this proposition.

Mr. Walker was re-elected by acclaim and briefly acknowledged the compliment.

The President remarked that the election of secretary was also a matter which did not require much time to consider, or many words. In Mr. Hurndall they had a most indefatigable and hard-working and courteous secretary, who had shown ever since he had held the office that he had the interests of the Association thoroughly at heart. (Applause).

Mr. Rogers was very pleased indeed to propose that Mr. Hurndall be again re-elected. He was so well-known to every individual member that it was quite unnecessary to "sing his praises." (Hear, hear.)

Mr. Western having seconded, the resolution was carried by acclamation.

Mr. Hurndall said he was much obliged for their confidence, and would continue to do his best. (App.)

Place of Next Meeting.

On the motion of Mr. Wheatley, seconded by Mr. Simpson, Reading was unanimously fixed as the place for holding the February meeting of the Association.

Correspondence.

The Hon. Secretary read letters of apology from Mr. J. Mellett Henley-on-Thames; Sir Henry Simpson, Windsor; Mr. P. Irving, Chipping Norton; Prof. Williams, Edinburgh; Mr. E. C. Howard, Newbury; and J. B. Tutt, and a telegram from Mr. W. Wilson, Berkhamstead.

A letter was next read from the Secretary of the Royal College, asking if it were the intention of the Associato subscribe towards the British Institute of Preventive Medicine, and, if so, to kindly send the contribution before the end of current year.

The Hon. Secretary read from the minutes, showing that on Dec. 7th, 1894, Mr. Wilson gave notice that at the February meeting he would propose that £25 be voted to the Institute, and that at the meeting on Feb. 22nd, that resolution was negatived.

Under these circumstances it was resolved, on the motion of Mr. Rogers, that the Hon. Secretary be requested to write Mr. Hill, informing him that the matter had already been decided by the Association, and forwarding a copy of resolution passed at the Reading meeting in February.

Mr. J. F. Simpson gave notice that at the next meeting he would move that a sum of £20 be given from the funds of the Association to the Jubilee Memorial Fund.

A circular letter was now read from the Lincolnshire Veterinary Association, with copy of a resolution passed at a recent meeting of that body, on "grunting" in horses in its relation to soundness.

It was resolved to set the subject down for discussion at the next meeting, and to forward a copy of the Lincolnshire circular to each member of this Association.

New Members.

The following Gentlemen were unanimously elected members of the Association:—Mr. G. E. King, of Abingdon, and Mr. Edward Laurence of Swindon, both proposed by Mr. Wheatley and seconded by the Hon. Secretary; Mr. J. A. Craft of Reading, proposed by the Hon. Secretary for Mr. E. C. Howard, and seconded by Mr. Wheatley; and Mr. J. W. Barford of Southampton, proposed by the Hon. Secretary and seconded by Mr. Lepper.

"Epilepsy in the Dog."

The next business was to carry on the adjourned debate on the paper on this subject, read by Mr. Watkins Pitchford at the Maidenhead meeting of the Associaton, on June 28th.

Mr. J. F. Simpson, who had been asked to re-open the debate, was unfortunately obliged to leave owing to pressing duties connected with the administration of the Royal College.

The Hon. Secretary said he rose because he did not wish it to appear that there was any hesitation to continue the discussion on the very able paper which Mr. Pitchford was kind enough to lay before the Association in June. Moreover the gentlemen who proposed and seconded the adjournment, and who should consequently have been there to continue the discussion, were both unfortunately detained, and Mr. Simpson had been called away. He therefore asked them to bear with him, that there might be no loss of time. He might say in the first place that he felt deeply indebted to Mr. Pitchford for so kindly acceding to his request when he asked him if he would read a paper, and moreover he was more than gratified when he had the pleasure of listening to the argumentative style which that gentleman adopted,

bringing forth a great deal of scientific evidence and proof in support of his arguments. One remark Mr. Pitchford made in the opening of his paper was that there was nothing in pathology which would lead them to define the disease of epilepsy, there were no anatomical changes. It struck him (Mr. Hurndall) at the time that so far as his own peculiar therapeutic tenets went, there was a fine opportunity for him to convince some of those gentlemen that he was not without some ground in the tenets to which he pinned his faith, and for this reason—that if there were no pathological changes taking place—nothing by which they could diagnose the disease, and yet they could cure it, how did they arrive at their method of procedure? Now he would show them, and give them an instance, of how homœopaths proceeded on Hahnemann's line of therapeutics. He did not attach so much importance to pathology as they did, simply because he relied more upon the case as it appeared before him at the time. That was what they were all obliged to do in all cases of epilepsy. They found, as he had said, that there was no constant anatomical change known in epilepsy, as there was, for instance, in inflammation of the lungs, pleurisy, and so on; but investigation, so far as it had been carried on up to the present time, pointed to the fact that there were histological changes which did take place in the medulla oblongata, in the upper portion of the spinal cord, and in the vaso-motor centres. Whatever might be the nature of the change there appeared to be excessive and perverted action in those parts, as Mr. Pitchford told them, and in that he perfectly agreed. But in the absence of any definite pathology what were they to depend upon as a guide for treatment? Mr. Pitchford told them, if he remembered rightly, that the great remedy, or one of the chief remedies at all events, was bromide of potassium. He (the speaker) suggested to them that if any of them thought it worth while to make further investigation into their materia medica and therapeutics generally, they would find that bromide of potassium was a palliative merely, and did not act in any specific manner on that disease. Hahnemann's system, on the other hand, certainly furnished a guide to dealing with cases of that description, because his principle depended entirely upon the relation which existed between the disease-producing powers of the drug and the curative properties of that drug. He wanted them to abandon the ridiculous idea that the system of homœopathy depended in any way upon the quantity of the dose. They often saw that suggested. The system of homœopathy had no more to do with the dose than it had with that mahogany table. (Hear, hear.) The essence of the system was the relation between the power of a drug to produce a disease, or symptoms which simulated that disease, and the curative properties of that drug in curing a disease which had symptoms similar to those it was capable of producing. In the subject under discussion, therefore, the question was—Have we any drugs capable of producing symptoms such as we find in epilepsy in the dog or any other animal? because epilepsy assumed various forms in various animals as well as in the human subject, with probably a greater intimacy of relation between the symptoms in the human subject and in the dog than the human subject and any other animal. Now the drugs capable of producing symptoms—which at any rate simulated epilepsy—were varied and numerous. Those two facts showed how futile it was, as Mr. Pitchford had pointed out, to expect to effect a cure with any particular specific in cases varying so very much. He had himself had a great many cases epilepsy in the dog, and he had found a great variety of symptoms. It would be apparent as they just glanced through two or three of those principal drugs, however, that while the symptoms in different cases varied, the similimum could be traced respectively in each. The symptoms were recognised as arising from the following causes, for instance lesions of the peripheral end of the nerves, or of the brain or spinal cord as the result of violence. Again from the emotions, which he believed was more often the case in dogs than they were aware of. For instance fright, often repeated, rendered a dog a very likely subject for epilepsy. Sexual irregularities, for instance if a dog served too many bitches, was another cause; and the disease arose also from disturbances in the digestive apparatus from reflex irritation through dentition (which was the most frequent in his experience) and worms, and in bitches uterine disturbances had a very powerful influence. Again, over-exertion and fatigue would frequently cause it. Among the remedies capable of producing symptoms simulating that diseased condition of epilepsy he would name first hydrocyanic acid. There was an essential similarity between the phenomena resulting in poisoning by that acid and epileptic paroxysms. This was affirmed by Pereira, Christison, and Tayler. Homœopathists had proved over and over again that the sudden falling, loss of consciousness, foaming at the mouth, dilated pupils, and convulsions, all formed a picture of an attack of epilepsy. Pereira stated distinctly that "whatever be the precise pathological condition of the brain in poisoning by this drug, it is probably identical with that which occurs during epileptic paroxysm." That was, from his (Mr. Hurndall's) standpoint a very valuable piece of evidence, bacause it was what he might be allowed to term unconscious homœopathising on the part of a man who probably never gave the slightest study to the subject. Then they had the results of experiments made by Dr. Hughes of Brighton, and Dr. Madden, with that drug; but in the doses they gave those experiments did not prove as satisfactory as had been wished, and this they attributed to the evanescent character of the drug. They then resorted to a test of the same drug in higher attenuations, from as much as 1 in 1000, and this was followed with marked success, especially in cases of epilepsy due to fright, and in young patients, when the paroxysm was ushered in by that peculiar sudden cry so often recognised not only in dogs but also in the human subject. Those were the particular symptoms which indicated that hydrocyanic acid might be useful. Amongst other remedies, upon which he would not dilate, he might mention nitrate of silver, arsenic in the diluted form, *artemesia vulgaris*, absinthe, cicuta virosa, cocculus, ignatia, stramonium, and strychnia. Absinthe was an interesting remedy. It had been noticed, especially in America and in France, that human subjects who took a great fancy to the use of absinthe became subject to epileptic fits, or to symptoms simulating epilepsy very closely. This fact struck a practitioner in America, and he accordingly had a tincture made from the plant artemesia, and used it in cases of epilepsy with marked success. He would confine himself to the two remedies in the use of which he had himself been most successful, viz. cuprum and plumbum. The very first case of epilepsy in the dog which he treated was when he was in practice in Liverpool. It was the case of an old dog, the property of a captain who traded continuously between one of our English ports and Turkey. He was not able to account for this dog's persistent attacks of epilepsy, which occurred three or four times daily. One particular symptom struck him at once, and led him to the selection of lead, viz., the fact that when the attack was coming on he every time attempted to scramble up the wall, and when he fell down unconscious he would remain so a few minutes, then jump up and shake himself; and in about four hours it would come on again. He treated that dog with acetate of lead in trituration—1 in a 1000, and he was quite cured in three weeks, never having another attack, although he had been sub-

ject to the disease for some months when he undertook the treatment. Amongst other things he noticed was that the dog was the subject of amaurosis, which was a symptom peculiarly marked in lead poisoning. The convulsions were very violent taking almost a maniacal form, and between the fits he would sometimes get into a state of coma, and would then be almost like a subject of delirium. He noted all those symptoms as he was treating him. He commenced with belladonna, but as that drug did not please him he referred to his materia medica, and there found a lot of those symptoms indicated under lead. In less than two days, after giving lead, the dog began to get better, and, as he had said, in about three weeks he was perfectly cured. But the greatest number of his successes had been with copper, and the reason for that he took to be because it was more suitable to infantile disorders. Cuprum had a most marked neurotic action on the brain, in fact every form of cerebral disorder might be induced by the poisonous action of copper. He had some interesting conversation with Professor Axe the other day. He knew he had been making investigations in Wales near some copper works, and asked him to describe what he saw among the mountain sheep there; and the Professor gave him the idea that he had observed several forms of cerebral disease among the sheep. Another interesting feature about the action of copper was that while it seemed capable of produciug any form of cerebral disorder, if they made an autopsy they would find no indication of any organic mischief, just as they found the same difficulty in a real idiopathic case of epilepsy. It was especially noticed in young animals, where it was due to difficult dentition, that copper was useful, and also if there had been any retrocession of the acute exanthemata. The greater number of his hundred or so cases had been in young animals from two to five or six months old. Another indication was very useful as a guide. He had observed on many occasions that the urine was scanty and very thick, suggesting albumen. Copper would produce that condition, but after taking copper the urine became larger in quantity, and assumed the normal colour. Bromide of potassium he (the speaker) looked upon as merely a sedative to the nervous tissue, checking the convulsions by deadening the reflex excitability. He looked upon its action as antipathic, it was palliative, but it could not be said to be curative. Mr. Pitchford had told them that he was not satisfied with it as a general agent, and he found that medical men in the human practice were of the same opinion. The disease was merely kept in check so long as bromide of potassium was given; on its discontinuance the symptoms recurred, so that the disease was not cured. With regard to the agents he had spoken of, those that acted distinctly on the nervous tissue seemed to restore the parts to their normal conditiou, the excessive and perverted action was done away with, and they got absolutely satisfactory cures—that was to say, he had had the opportunity of watching animals so treated for a long time afterwards, and had had the evidence of owners, and was perfectly satisfied that nothing had transpired since. What was more, the action was very rapid, as a rule they had not to wait more than 24 hours before they began to see good results, and probably they would effect a cure in three or four days in any but chronic cases, and certainly if the disorder arose from dentition. If the urinary system was in any way affected they would find nothing better. But in order that they might be able to get at the true similimum they must take cases as they found them. Among the many drugs to which he had referred they would find if the similimum for one did not answer they would find it under another. He would like to read them a sentence from an American publication. It was difficult, he knew, for those who had not entered into the spirit of Hahnemann's system of prescribing drugs to understand how it was that the higher attenuations of a drug acted better than the crude drug itself. He could understand that that was a very difficult thing to appreciate. Naturally, the first idea was: "If it is a good thing to take let us take a good deal of it and get the action as quickly as possible." Many a time he himself had experienced, in his own person as well as in his patients, that he had overdone the thing, had given medicine which was too strong, and so aggravated the symptoms; but that had only proved to him that he was on the right line, and had got the right medicine for the disease. All he had to do when that was the case was to drop the medicine for a day or two, and start it again in a more attenuated state. Mr. Hurndall then quoted from *Homœopathic Recorder* "The most recent experiments have taught that crude medicinal substances, if taken by an experimenter for the purpose of ascertaining their peculiar effects, will not disclose the same wealth of latent powers as when they are taken in a highly attenuated state, potentiated by means of trituration and succussion." As a result of his own practice, he went on to say, especially among dogs, he had found that a very truthful statement; he had found that whilst a disease would not yield to a drug in its crude state, it yielded rapidly to the same drug administered in a more attenuated state. In conclusion, he thanked Mr. Pitchford once more for his paper, and only wished more had been present to continue the discussion, for the subject was one of great interest. (Applause.)

Mr. Rogers, being asked to say a few words, said he could only give his own ideas of treatment from meeting the ordinary number of cases of dogs in fits which came before a town practitioner. On investigation he found that by far the greater number of epileptic seizures were due to one of two causes, either it was first a puppy of five or six months that was cutting its permanent canine teeth, and generally one found in such cases that the temporary canine teeth were left in, and the gum was somewhat inflamed. There one had clearly peripheral irritation. In another class they found the dog had vomited one or two round worms, and treatment would get rid of a mass, or a great number, of round worms. He had also found cases of epilepsy due to the swallowing of a foreign body, such as a small indiarubber ball. All those conditions seem to point to its being a disturbance of function, the animal suffering from a peripheral irritation which in a healthy animal would not be followed by fits. Great fright often also produced epileptic symptoms. In the latter case when a dog was brought in it was not always wise to add to its excitement by extracting teeth or giving vermifuges, but he thought it most important to at first insist on the animal not being "fussed round." After it had had a sedative, for which he generally relied on bromide of potassium, he advised its being kept perfectly quiet in a darkened room. Afterwards he extracted the teeth or exhibited the vermifuge. If the attack were due to worms, one often found that it never recurred. The condition of the human subject was, he believed, closely connected with heart disease, but he had made a good many post-mortems on dogs, a fair number of which had been subject to epileptic fits, and had never traced any abnormal condition of the heart. He had noticed that if after giving bromide or chloral the animal indulged in a long sleep, he generally woke up free; but of course there was a secondary treatment having relation to the two chief causes which he had mentioned. (Applause.)

The Hon. Sec. having read a brief communication on the subject from Mr. Western (who had been obliged to leave),

Mr. Watkins Pitchford replied in a few words. He thanked the members for their kindly criticism of his paper, and it had given him especial pleasure that their

Hon. Sec. had taken part in it so ably. He (Mr. Pitchford) could not lay claim to any originality of thought or of experiment in the matter, the facts he had laid before them having been gleaned from the ideas of others, and the instances he had brought forward could hardly be considered more original, because they must be instances which would fall to the lot of every practitioner.

The HON. SECRETARY proposed a very hearty vote of thanks to the outgoing President (Mr. Goodall) for his services during the year, adding thereto an expression of the deep sympathy of the Association with Mr. Goodall in the two bereavements he had experienced during his year of office.

Mr. ROGERS seconded the resolution which was passed with cordial unanimity.

Mr. ROGERS then proposed and Mr. Walker seconded a very hearty vote of thanks to Mr. Pitchford for his paper, which was carried by acclamation, and suitably acknowledged.

The meeting closed with a cordial vote of thanks to Mr. Butters for his conduct in the chair, moved by the Hon. Sec. and seconded by Mr. Rogers.

EXTRACTS AND NOTES.

SURRA.

The following interesting summary of a further report on this disease of the horse in India, has been issued by Professor Lingard, M.B., Civil Veterinary Department, India. This observer has done a stupendous amount of experimental work in connection with surra, space alone prevents the reproduction of some of his tables, which are models of painstaking observations of great scientific value.

"Of twenty-one horses suffering from surra, submitted to the arsenical treatment, fifteen were known to have suffered from the disease for periods varying from ten to thirty-five days previous to their admission to the Laboratory Hospital. Of the above fifteen animals, six failed to survive for more than a fortnight after the treatment was commenced, owing to their weak condition, brought about by the paroxysms of fever they had previously passed through.

2. In three of the twenty-one cases, the hæmatozoon re-appeared in the blood after an absence of 28, 2, and 70 days respectively, but in the case of Animal CXVII, in which the organisms re-appeared after two days, a sufficient reason is patent to account for its recurrence, in that the arsenic was first administered just before the termination of an intermission, and a sufficient quantity of the drug had not been given to destroy the developing trypanosoma, (surra organism) previous to the recurrence of a fresh paroxysm.

(3.) In the blood of two horses (Nos. CXXII and CXXIII) the hæmatozoon appeared a second time after the animals had been submitted to the Arsenical treatment, and it is of interest to observe, that in both the first recurrence took place after intermissions of 52 and 50 days, whilst the second recurrence occurred after intermissions of 50 and 30 days respectively.

4. It has previously been noted that the most common periods during treatment by arsenic in which the hæmatozoon re-appears in the circulation of equines, whose systems are under the influence of the drug, is somewhere about the 25th, 50th, or 75th day of an intermission, *i.e.* subsequent to the disappearance of the organism from the circulation of the animal. This gives one an idea of the deterrent effect produced on the immature form of the surra hæmatozoon, and its great tenacity of life, for in ordinary cases of surra the intermissions between the paroxysms, rarely if ever, exceed a maximum duration of seven days.

5. Horse number LXXXIX, an Australian, whose cure by arsenic was detailed in my last Annual Summary Report of July 1894, continued to thrive and gain in body weight. The difference in weight, during the period of disease and after cure was effected, was nearly 240 lbs. This animal was treated, and the blood daily examined up to February 23rd, 1895—a period of nearly one year and four months.

6. No. CXV, a Persian Gulf entire horse, aged four years, belonging to the Bombay Mounted Police, was seized with fever (temperature 105° F.) in the middle of October 1894. The animal was sent to the Poona Laboratory on November 29th, and the same evening the arsenical treatment was commenced. The hæmatozoon disappeared from the blood on 4th December, and did not again return.

This animal was returned from Poona to the Mounted Police, Bombay, on March 9th 1895, cured. Two days later a Board there examined and reported that the animal was sound and healthy, and certified it fit for duty. A letter received from the Commissioner of Police, Bombay, dated June 28th, 1895, stated "the horse sent back from Poona on 10th March last is at present in good condition."

7. No. CXIX, a Herati gelding, aged 8 years, belonging to the Bombay Tramway Company. This animal was found to be suffering with fever on December 1st, 1894, and on the 4th idem the hæmatozoon was discovered in its blood.

Treatment commenced at the Poona Laboratory on December 6th, and the organism disappeared from the circulation on the 8th of the same month, but again appeared on the 16th February, 1895, after an absence of 70 days. At the present time June 28th, 207 days after the first discovery of the hæmatozoon in the blood, the animal is in good condition, has regained flesh, and weighs 902 lbs. The surra organism has now been absent for an extended period, and hopes are entertained of yet being able to save the animal.

Does one attack of Surra protect a horse against a second attack of the same disease?

An Australian gelding, the subject of surra in December 1893, was cured of this disease by the administration of arsenic and iodide of arsenic and mercury.

Between March and October 1894, the animal gained 235·75 lbs. in weight, and was in a perfect state of health and condition. Fifteen months after the date of the previous attack, and twelve months after the cure was effected, the animal was inoculated with a minute drop of surra blood—a mere trace of soiled blood being smeared over a scratch on the muzzle—in order to ascertain whether any immunity had been conferred by the previous attack. The latent period of the second attack occupied seven days. The progress of the disease was marked as usual by paroxysms of fever and intermissions, the former occupying a much more prolonged period, twenty-two days, and the latter being shorter than usual, only two days.

Death took place on the fifty-third day of the disease, clearly proving that one attack of Surra is unable to protect against a second attack.

Notes for guidance in the treatment of Surra in Equines.

Only animals in good or in fairly good condition are suitable to undergo treatment for surra. It will be found impracticable to attempt to cure ill preserved animals, such as Tonga ponies, towards the end of a heavy and hard-worked season.

2. It is of the utmost importance for the successful treatment of surra, that the disease be recognised, and the animal subjected to the drug with the least possible delay.

3. The weight of the animal should be ascertained frequently, when practicable, so that the maximum dose of arsenic to be administered during the treatment may be regulated.

4. Arsenic should be given in the form of liquor arsenicalis.

5. In most cases of surra in equines, a dose of five grains may be commenced with, and given twice daily for forty-eight hours, the quantity being increased by half a grain after every four doses have been administered, until seven grains are reached. The latter amount should be continued twice daily for seven days in the case of an animal below eight hundred pounds in weight, but in Australians one thousand pounds in weight and upwards, the dose may be increased by the addition of half a grain up to nine or even ten grains, twice daily for the same period. The dose should then be gradually reduced by half a grain or one grain according to the condition of the patient, until a four grain dose has been reached. Again, if possible, after a period of two days, repeat the treatment increasing and decreasing the dose of arsenic as above described. But the fact must never be lost sight of, that if arsenic be administered to an animal for a prolonged period, symptoms of gastric irritation will supervene sooner or later. It has been found that by giving kaunji to the animal, morning and evening directly after the medicine, the above mentioned symptoms have not made their appearance; consequently it will be advisable to give kaunji to the animals from the commencement of the arsenical treatment.

6. Daily microscopic observation of the blood should be made, and the number of organisms recorded on a chart for ready reference, together with the temperature, pulse and respirations of the patient, which should be taken three times daily, viz. 8 a.m., 1 p.m., and 5 p.m.

7. Most animals will take the drug in one to two pints of water from a bucket, without any trouble. If this be found occasionally impracticable, the arsenic can be mixed with the corn and bran in the form of liquor arsenicalis; but in obstinate cases the medicine will have to be administered to the animal in the form of a bolus or in a draught.

8. Acute Desquamative Nephritis is a common complication of surra, but it must not contra-indicate the administration of arsenic, although the maximum doses cannot be maintained, otherwise the animal will have a relapse, and ultimately succumb to the disease.

9. Animals suffering from surra, as a general rule, have voracious appetites. It has been found by practical experience that the following amounts of hay, corn, etc., are necessary for an Australian horse weighing 1000 lbs. and over; for on this the animal keeps in fair condition and during convalescence puts on flesh rapidly—

Hay 15 to 20 lbs. Lucerne (fresh) 10 lbs. Barley 8 to 14 lbs. or Gram 6 to 10 lbs. Bran 1½ to 3 lbs. Salt 1½ ounces.	Daily.

10. When once the organism of surra has vanished for some days from the circulation of the animal under treatment, gentle exercise commencing with five hundred yards, and gradually increasing to one mile, morning and evening, may be allowed. But if the temperature becomes elevated, all exercise must be stopped, until the former again registers within normal limits.

11. The exudation of semi-solid material (œdema) into the subcutaneous tissues, notably that of the lower extremities, sheath and under surface of the abdomen, generally becomes absorbed after a time under the influence of arsenic and exercise, but this may be accelerated by daily 'massage' of the body and limbs.

12. Surra horses, under treatment with arsenic for long periods, and which eventually die, at their autopsies frequently present some atrophy of the spleen. Consequently subcutaneous injections of infusion of spleens have been made in order to ascertain whether the material injected would perform the function of the atrophied organ. Encouraging results have been obtained.

13. Certain of the horse surra cases under treatment somewhat suddenly developed symptoms of chronic arsenical poisoning. These, which include partial loss of power over the hind quarters, crossing of the hind limbs when walking, and general unsteadiness, and nervous tremours, usually proved fatal within 48 hours, although the further administration of the drug was immediately discontinued on their recognition. In some of the later cases under our treatment, these fatal symptoms have been successfully combated by the subcutaneous injection of infusions of spleen and testicle (sheep).

14. The question with regard to the administration of arsenic to animals at the commencement of the rains, as a preventitive, in districts where surra is epizootic, is one worthy of trial. A dose of five grains of arsenic in the form of liquor arsenicalis (ten drachms) given once a day in the drinking water to each animal, could not fail to produce a beneficial effect, and could with safety be continued for a month at a time. The dose of arsenic should then be gradually reduced every three days by half a grain at a time until it is discontinued altogether. An interval of seven days should then be allowed to elapse, and again the same process persevered in with intervals, until the termination of the rains, or end of October.

CASE OF FOOT-AND-MOUTH DISEASE IN A BOY.

By William Bligh, M.D., B.S., Lond.
Late House Surgeon, Guy's Hospital.

Unfortunately, this case was not seen until the fifth day of the disease, the history up to that time gleaned from the mother being as follows. The patient, a healthy schoolboy aged thirteen years, was quite well until July 18th. On the morning of that day he complained, while eating, of some soreness of the mouth; he did not feel ill, and went to school as usual. On the 19th the soreness was worse, and the mother noticed some swelling of the lips, with "little lumps" on their insides; the eyes also became inflamed. On the 20th blisters were noted in the mouth and a few itchy spots appeared on the hands; the mouth was very sore, and the patient was given alum and water to wash it with. On the 21st and 22nd the mouth became more painful and more spots came out on the hands. Up to this date the boy was feeling fairly well; but on the 23rd he became feverish, dull, and listless, and I was asked to see him.

I found him in the following condition. He was evidently very ill—pale, listless, and apathetic. The pulse was markedly slowed (fifty-four per minute); the temperature at 5 30 p.m. was 104 F. The lips were considerably swollen and covered with ruptured vesicles showing bases grey with heaped-up epithelium. The tongue was thickly coated with grey epithelium, which on being scraped away showed irregular, raw patches. The tongue itself was not swollen. The hard and soft palate showed circular grey patches with surrounding injection; these patches had coalesced on the hard palate, forming an irregular serpiginous outline like one sees in herpes affecting this region. On the left of the swollen uvula there were two, and on the right one, such circular

patches, and a few also on the anterior pillars of the fauces. The gums, pharynx, and insides of the cheeks were free. There was great fœtor of breath and constant dribbling of serum and saliva. The eyelids presented an appearance closely resembling an ordinary eczematous blephartis, there being dried muco-pus adherent to the margins, and conjunctivitis limited to the neighbourhood of the lids. At the junction of the skin and mucous membrane at the left ala nasi there was one vesicle, but the mucous membrane of the nares was unaffected. On each hand there were many vesicles, mostly about the size of a goosequill in section, containing clear serous fluid, and each surrounded by a narrow zone of hyeræmia. They were distributed almost entirely on the palms of the hands, palmar surfaces of the fingers and backs of the two distal phalanges. The coronæ were especially affected, the vesicles here being smaller and tending to run into each other, while beneath the thick courticle of the palms and palmar surfaces of the fingers they were very numerous, but discrete and not raised. The backs of the hands were quite free, and there were none on the wrist or forearm of the left hand, but the right wrist had three on its flexor and one on its dorsal aspect. The number of vesicles may be judged by the fact that I counted forty seven on the right hand alone. The toes were quite free, but there were two or three scattered vesicles over the metatarsals on either side. The rest of the body was free. There was no glandular enlargement and no abnormal physical sign to be discovered in any organ The urine was normal. The patient was given a mixture containing perchloride of iron, sulphate of quinine, and chlorate of potash, the mouth ordered to be frequently washed out with dilute Condy's fluid, the eyes to be bathed with boric acid solution, and some yellow oxide of mercury olntment to be smeared along the lid margins. Three capillary tubes were filled from some of the vesicles on the hands and forwarded to the Clinical Research Association for bacteriological investigation. (Their report is added).

On the 25th drowsiness was still marked, two or three of the vesicles on the fingers had become hæmorrhagic; the bowels had acted well and the breath was less offensive. The morning temperature was 102 and the pulse 55.

On the 26th there was slight improvement generally, the tongue tending to clean; the appetite was returning, and the boy began to take some interest in his surroundings. The morning temperature was 100 and the pulse 55.

On the 28th the lad was quite bright; the lips and tongue were healing; slobbering only took place during sleep; the vesicles on the hands were drying up without suppuration, and the eyes were nearly well. The temperature was 99 and the pulse 52. Convalescence was now rapid, and in a few days he was quite well, the slow pulse being almost the last symptom to disappear.

The diagnosis presented no difficulties; if one makes a list of the various diseases characterised by vesicles we should have variola, varicella, vaccinia rash, syphilis, herpetic fever, foot-and-mouth disease, eczema, herpes, erythema bullosum, pemphigus, cheiropompholyx, scabies, traumatism, and hand-and-mouth disease of Hutchinson. From amongst these, foot-and-mouth disease is picked out by the distribution and character of the rash, its life history, the association of hand and mouth, the absence of prodromal fever, a history of previous varicella, and finally and conclusively, by the results of the bacteriological investigation. The source of infection remains a mystery. The cows on the estate on which the boy's father lives and those belonging to the dairy from which the family's milk supply is obtained were alike free from disease, and no sheep, pigs, or donkeys in the neighbourhood were, as far as I could ascertain, affected nor had the boy been employed in looking after any such animals.

[The following is the report of the Clinical Research Association:—

"Microscopic examination of the serum in the three tubes submitted to us after appropriate staining gave the following results. In two of the tubes the serum contained cocci, arranged in pairs and as staphylococci, but with some few streptococci. In the third, however, the streptococci preponderated. These organisms were isolated by means of plate cultivations, when the staphylococcus was found to present no marked differences from the staphylococcus epidermidis albus described by Welch as being a common inhabitant of the skin. The streptococcus presented the following characteristics. The organism grew well, though rather slowly, on all nutrient media except potato (on which the growth was extremely scanty). The growth in streak cultures consisted of minute, transparent, jelly-like, spherical colonies, not confluent, and not making their appearance until forty-eight to sixty hours after after inoculation. Microscopically, it occurred in long, wavy chains of from thirty to fifty members, the individual cocci being grouped in pairs and somewhat smaller than the ordinary streptococcus erysipelatosis. It stained well with the aniline dyes and was not de-colourised by gram. From a consideration of these points we have no doubt that we are dealing with the particular pathogenic streptococcus Klein described as being the cause of the foot-and-mouth disease among cattle, &c.

CHAL. H. WELLS, Secretary.

Caterham Valley.

ANOTHER "CRUELTY" PROSECUTION.

At Chelmsford County Sessions on Friday, T. Kemble, Esq., in the chair, Mr. Wm. Castledine, a veterinary surgeon, of Writtle, was charged with ill treating and torturing a certain gelding.—Mr. F. H. Colam, barrister, prosecuted on behalf of the R.S.P.C.A.; while Mr. W. S. Brindle, barrister, (instructed by Mr. Walter Hilliard), defended.—Mr. Colam explained that the animal was purchased by defendant previous to November 2nd, and subsequently it was sent to the kennels, at Ingatestone, a distance of eight miles. A man named Morgan was in charge, and investigation showed that the gelding's two fore feet were much diseased. There was no doubt that Mr. Castledine was aware of its condition, but the object was evidently to get it to its destination alive—a dead horse was not worth so much.—P.C. Mynott deposed that as the animal walked blood was oozing from the feet, though at the same time he did not order the man to stop.—Replying to the Bench, both counsel intimated that the officer had power to have had the animal slaughtered there and then; but the Clerk (Mr. W. W. Duffield) held that such was not the case. The Act did not apply to such cases, though the constable could have arrested the man had he considered that course necessary.—P.C. Scott corroborated, adding that his advice not to proceed further was not taken.—Inspector Rogers (Colchester), of the R.S.P.C.A., stated that he had never seen a worse case.—Rogers produced a letter, written by defendant to the kennels. This document, after saying that the animal's feet were "over shot," asked that it should be sent for, as it was fit to travel.—Mr. Brindle immediately urged that this letter relieved defendant of all responsibility. Defendant did not order Morgan to do what he did. Consequently it was for the prosecution to show that he had a guilty knowledge when the communication was forwarded to Ingatestone.—Mr. Smith, veterinary surgeon, of Ingatestone, bore out Mr. Colam's opening statement that the horse was not in a fit state to travel, and must have been in pain. The whole feet

were diseased.—Mr. Brindle submitted that the disease spoken of was a painless deformity. He called Mr. George Dennis Norman, veterinary surgeon, of Chelmsford, who said in ordinary cases of "over-shot" fetlocks there would be no suffering. If the animal was hurried, however, there would be. The Magistrate decided to convict, and fined defendant 10s., with £2 3s. 6d. costs, including one guinea solicitor's fee, and 10s. 6d. for Mr. Smith, the veterinary surgeon. William Morgan, the kennel man, was similarly charged, but the case against him was dismissed.—Mr. Brindle later on asked for a case, but Mr. Colam contended that there was no point of law in dispute, and it was only on that ground that a case could be granted.—Mr. Brindle was persistent, and in the end permission was granted, though the Chairman hoped the counsel (who is Whip to the Staghounds) would think better of it. If there was no point for the High Court to decide, that was his look-out.—*East Anglian Daily Times.*

[The defendant is a registered practitioner, as is Mr. Smith. Mr. G. D. Norman is a M.R.C.V.S.—Ed.]

THE SALTING OF SNOW-COVERED STREETS.

Important Decision.

Lord Low, in the Court of Session on the 28th ult., gave judgment in an action in which James Ogston, merchant, Aberdeen, asked the Court to interdict the Aberdeen Street Tramway Company from heaping snow on the sides of Aberdeen thoroughfares when clearing their lines by means of snowploughs, rotary brushes, or other means. Complainers also asked the Court to interdict the respondents from putting salt on the snow in order to melt it, as such a mixture was injurious to horses.

His Lordship, in giving judgment, said it was really the duty of the Town Council to a reasonable degree to clear the streets in the event of a heavy snowfall. The point raised was, in his judgment, entirely one of public interest and convenience. So far as the clearing of the tramway line was concerned, his lordship was of opinion that the complainer had not made out a case for the interference of the Court. As regarded the question of putting salt on the snow, that was a matter of more difficulty. A mixture of salt and snow, it had been shown, produced extreme cold, and was injurious to horses, causing swellings in the eyes, and occasionally suppurating sores. It was only however, in the case of a very severe downfall such as that of last winter that there was any serious risk; but if a state of matters existed by which salt water from the tramway lines mixed with snow and formed a slush injurious to horses it was for the Town Council to consider by what method they could best clear the streets to the public advantage. His Lordship thought it was sufficient for the decision of this case that the Town Council had come to be of opinion that it was to the public interest that respondents should be allowed to do part of the work of clearing the streets by sending snow ploughs along the thoroughfares, and melting the snow by means of salt, and that that rule is adopted in Edinburgh, Glasgow, and Dundee. Therefore his Lordship was of opinion that the note fell to be refused. On the motion of council for the respondents, his Lordship gave them expenses.—*Glasgow Evening News.*

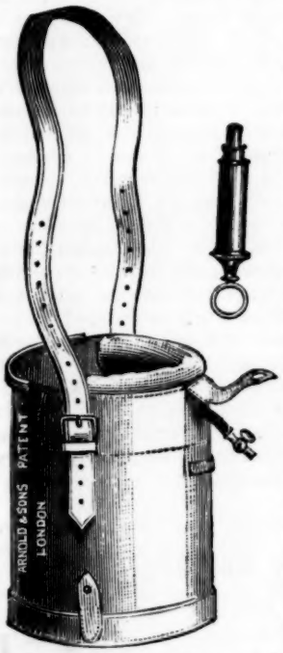
Appointment of a Veterinary Surgeon.

At a meeting of the City Commission of Sewers on December 3rd, the Streets Committee brought up a report on the question of the appointment of a veterinary surgeon. The three candidates selected by the committee were Mr. A. H. Farrow, Mr. J. A. Gosling, and Mr. J. E. Kitchin.

Mr. Morton raised the question whether the work would be done by the elected candidate or by some representative. Mr. Pannell put this inquiry to each of the candidates, and the answer was that they would do the work themselves. A show of hands was taken, and the election resulted as follows: Mr. Kitchin, 37 votes; Mr. Farrow, 9; and Mr. Gosling, 2.—*The City Press.*

NEW AND IMPROVED FORM OF CHLOROFORM MUZZLE.—PATENTED.

The following illustration shows a new form of chloroform muzzle, invented by Mr. Dowell, which has been used with considerable success.



Having cast and secured the horse, remove the cap and put the muzzle over the upper jaw, the edge opposite the rubber tube and stop cock being in the horse's mouth. Fit the head strap behind the ears, and then proceed to blow up the pneumatic pad with the brass pump until the upper edge of the muzzle fits the horse's face, being careful not to make it fit so close as to compress and occlude the nasal chambers.

Now attach the cap to the lower button on the muzzle, place the chloroformed sponge on the wire grating and close the cap, leaving the sliding ventilator open. Should the horse struggle a great deal, undo the top button and let air in under the cap. After the horse is once under the influence of the chloroform, the cap and ventilator should be closed, as he will get plenty of air through the mouth, the soft palate having become paralysed.

The tongue should always be held by the assistant, as it is apt to become lacerated by the teeth when the horse is coming round, and it also acts as a good index of the stage of anæsthesia that the animal is in.

The patentees and manufacturers are Arnold and Sons, of West Smithfield, London. Price complete with brass pump, etc. 30s.

CORRESPONDENCE.

THE CURABILITY OF CANKER.

Sir,

Anyone reading Mr. Malcolm's letter in your last issue on the above subject would, I fancy, be under the impression that there was something very mysterious about the successful treatment of canker; and that that great secret was in the hands of Mr. Malcolm. As a matter of fact canker has been successfully treated for nearly a hundred years; *vide:* "A Treatise on Veterinary Medi-

cine," by James White of Exeter, in 1809. A few years later, in 1826, Delabere Blaine—in his Outlines of the Veterinary Art—devotes four pages to the subject; wherein he explains most clearly the method of treatment to be adopted to insure success. This treatment is precisely the same as that set forth by Mr. Malcolm in his paper some three years ago; there is practically no difference. Blaine tells us that after burning off the cankerous portions we are to dress with red oxide of mercury, acetate of copper or some other escharotic, as may be judged most suitable, then after applying pellets of tow, to bandage the whole foot firmly, so as to keep up an equal pressure. He is also most particular to impress upon us that the diseased foot should have constant attention; he says "A very great fault is often committed by dressing cankered feet too seldom. No case ought to be dressed less frequently than every day, and very bad cases should be opened twice a day. From a wish to avoid trouble this is often neglected, and a cure that might be quickly performed is needlessly protracted."

In all the practices where I have been we have employed Blaine's method and with every success; only last week we discharged, cured, a very bad case of long standing. In my opinion the only difficulty we have to contend with in a country practice is that the farmer cannot afford to pay for the veterinary Surgeen's constant visits, neither can the veterinary surgeon afford the time to attend regularly and this, I think, is the reason for so many failures. Provided that we could always have our cases at home and we were not too lazy to attend to them, I think most veterinary surgeons would, like Mr. Malcolm, be quite willing to back their skill with their pockets. As regards Prof. Pritchard's statement, we are all certainly entitled to our own opinions, one person's opinion may be worth having whilst another's is not, but we cannot get over the fact that Prof. Pritchard's opinion is very often sought for, and when given invariably carries with it great weight.—Yours faithfully.

Ormskirk. H. B.

THE PUFF OBLIQUE.

Sir,

As the enclosed cutting has now appeared for the second time in the "Doggie" papers, will you kindly give the members of the profession the chance of reading this most wonderful operation (?) as related in the *Westminster Gazette*.

F. W. C.

"I may mention a fact just told me by Mr. E. H. Scott, M.R.C.V.S., of the Dogs' Hospital, High Street, Sydenham. "As far as glass eyes go," said he, I had one made for a dog."

"What sort of a dog was it?" I asked. "A stud Pug one," said he, "and a beautiful dog it was, a fine shape, but, terribly disfigured in one eye. It was double the normal size and ghastly in appearance, standing right out from the socket. I suggested an operation and an artificial eye, at which the owner rather smiled."

"He was incredulous of the possibility of a glass-eyed dog, of course?"

"Yes; but he eventually agreed to let me try my hand, as it was such a valuable dog, and on my assuring him that I would do it no harm we injected cocaine round the membranes of the eye, and then removed part—and only part—of the eye, leaving sufficient to form a bed for the artificial eye."

"Did it stick in?"

"We put a shell in first to keep the lid in position. We had to get the eye specially to colour and shape, and at last we fixed it in. It matched so well that you had to look very close indeed to know it from the natural eye. It made a wonderful improvement in the dog. It was £20 better in appearance."

"And the dog wore it without inconvenience or pain?"

"Yes. It's been exhibited often since."

"Have the judges known it was glass-eyed?"

"No. They couldn't tell. It's deceived me even for the moment when I've seen it and not happened to remember that it was the Pug I'd attended. Of course, the eye has to be taken out occasionally and cleaned."

INVERSION OF THE BLADDER.

Sir,

In further reply to Mr. Dollar, I consider that by his last letter he makes confusion worse confounded. To prove Mr. Dollar's inconsistency, I take the following extracts from his translation of Möller's Surgery:—

"In cows and sows, infrequently in bitches, the lower wall of the vagina is ruptured during delivery, the urinary bladder passes through the opening, and may even project beyond the vulva (prolapsus vesicæ). The condition is distinguished by the prolapsed viscus being covered with serosa. Gradually it becomes distended, and assumes an almost spherical form, small quantities of urine are discharged on pressure."

"Inversion of the urinary bladder is a condition in which the bladder is turned inside out, passing through the urethra something like a reversed pocket."

"Prolapsus vesicæ is evidently graver than inversion, as the peritoneal cavity is opened and peritonitis is liable to occur, a danger which is absent in inversion. Reposition is only possible in recent prolapse, where the serosa of the bladder has undergone no considerable change. Otherwise septic peritonitis occurs and invariably proves fatal. The prognosis is more favourable in inversio vesicæ, the mucous membrane of the bladder possesses greater resistance."

It is very evident from the above extract that Mr. Dollar makes a clear distinction between "prolapse" and "inversion," yet in his last letter he uses the following words:—

"The title inversion or prolapse is ridiculous. The one includes the other. The figure is illustrative both of inversion and of prolapse."

It may be convenient, but must be a long way from accurate, to make one illustration represent two very different pathological lesions.—Yours faithfully,

J. K. Bruce.

NEED FOR A V.M.A. IN ULSTER.

Sir,

I take it for granted that all are agreed that veterinary societies tend to improve the status of our profession, and to promote friendly feeling and interchange of thought and experience among those who belong to them.

On looking over the list of V.M.A's given in *The Veterinary Record*, I find England has over a dozen, Scotland four, *and Ireland one*. Why is this? Can the M.R.C.V.S. of Ireland afford to do without them? I for one think not, so I appeal to those M.R.C.V.S. residing in Ulster to combine for our mutual benefit. I have mentioned this matter to those with whom I am acquainted and they are all willing, but seem to think that it is the privilege of their seniors to make the first move, hoping this may have the desired effect.—I am yours, etc.

Cookstown, Dec. 2, '95. Wm. G. Lamont, M.R.C.V.S.

Communications, Books, and Papers received:—Messrs. J. Gregg, G. Mayall, J. A. Todd, W. G. Lamont, A. Bennett, F. Crowhurst, F. W. Cosgrove, H. W. Caton, H. Bidlake, J. K. Bruce, W. J. Hodges.

East Anglian Daily Times, *The City Press*.